

Serial No. 09/801,497
August 3, 2004
Reply to the Office Action dated April 5, 2004
Page 2 of 10

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A mobile communication device having a plurality of communication systems supporting different frequency bands, comprising:

- an antenna;
- a transmitter for each of the plurality of communication systems;
- a receiver for each of the plurality of communication systems;
- a diplexer transmitting transmission signals from the plurality of communication systems to said antenna, and distributing reception signals received via said antenna to the plurality of communication systems;
- a high-frequency switch for each of the plurality of communication systems, arranged to switch the signals between said transmitter and said receiver, said high-frequency switch being directly connected to said diplexer; and
- a directional coupler extracting portions of the transmission signals, and sending the results to an automatic gain control circuit, said directional coupler being disposed between said antenna and said diplexer.

Claim 2 (original): A high-frequency composite unit used in a mobile communication device according to Claim 1, said high-frequency composite unit including a microwave circuit carrying the plurality of communication systems, wherein said high-frequency composite unit is defined by a multilayer substrate including a laminated body including a plurality of dielectric layers, the multilayer substrate having said diplexer, said high-frequency switches, and said directional coupler.

Serial No. 09/801,497

August 3, 2004

Reply to the Office Action dated April 5, 2004

Page 3 of 10

Claim 3 (original): A high-frequency composite unit according to Claim 2, wherein said diplexer includes an inductance element and a capacitance element, said high-frequency switch includes a switching element, an inductance element, and a capacitance element, and said directional coupler includes a primary line and a secondary line, the multilayer substrate includes the switching element, the inductance element, the capacitance element, the primary line, and the secondary line, and the multilayer substrate includes a connector connecting the switching element, the inductance element, the capacitance element, the primary line, and the secondary line.

Claim 4 (original): A mobile communication device according to Claim 1, further comprising high-frequency filters, said high-frequency filters being arranged subsequent to said high-frequency switches and being connected to said receivers.

Claim 5 (original): A high-frequency composite unit used in a mobile communication device according to Claim 4, said high-frequency composite unit including a microwave circuit carrying the plurality of communication systems, wherein said high-frequency composite unit includes a multilayer substrate having a laminated body defined by a plurality of dielectric layers, the multilayer substrate having said diplexer, said high-frequency switches, and said directional coupler.

Claim 6 (original): A high-frequency composite unit according to Claim 5, wherein said diplexer includes an inductance element and a capacitance element, said high-frequency switch includes a switching element, an inductance element, and a capacitance element, and said directional coupler includes a primary line and a secondary line, the multilayer substrate includes the switching element, the inductance element, the capacitance element, the primary line, and the secondary line, and the multilayer substrate further includes a connector connecting the switching element, the inductance element, the capacitance element, the primary line, and the secondary line.

Serial No. 09/801,497
August 3, 2004
Reply to the Office Action dated April 5, 2004
Page 4 of 10

Claim 7 (original): A mobile communication device according to Claim 1, wherein said plurality of communication systems include DCS and GSM systems.

Claim 8 (original): A mobile communication device according to claim 1, wherein a notch filter is provided between said transmitters and said high-frequency switches.

Claim 9 (original): A mobile communication device according to Claim 1, wherein said directional coupler includes a port.

Claim 10 (original): A mobile communication device according to Claim 1, wherein said diplexer includes inductance elements and capacitors.

Claim 11 (currently amended): A dual-band cellular phone device having two communication systems supporting different frequency bands, comprising:

an antenna;

a transmitter for each of the two communication systems;

a receiver for each of the two communication systems;

a diplexer transmitting transmission signals from the two communication systems to said antenna, and distributing reception signals received via said antenna to the two communication systems;

a high-frequency switch for each of the two communication systems, arranged to switch the signals between said transmitter and said receiver, said high-frequency switch being directly connected to said diplexer; and

a directional coupler extracting portions of the transmission signals, and sending the results to an automatic gain control circuit, said directional coupler being disposed between said antenna and said diplexer.

Serial No. 09/801,497
August 3, 2004
Reply to the Office Action dated April 5, 2004
Page 5 of 10

Claim 12 (original): A high-frequency composite unit used in a dual-band cellular phone device according to Claim 11, said high-frequency composite unit including a microwave circuit carrying the two communication systems, wherein said high-frequency composite unit is defined by a multilayer substrate including a laminated body having a plurality of dielectric layers, the multilayer substrate having said diplexer, said high-frequency switches, and said directional coupler.

Claim 13 (original): A high-frequency composite unit according to Claim 12, wherein said diplexer includes an inductance element and a capacitance element, said high-frequency switch includes a switching element, an inductance element, and a capacitance element, and said directional coupler includes a primary line and a secondary line, the multilayer substrate includes the switching element, the inductance element, the capacitance element, the primary line, and the secondary line, and the multilayer substrate further includes a connector connecting the switching element, the inductance element, the capacitance element, the primary line, and the secondary line.

Claim 14 (original): A dual-band cellular phone device according to Claim 11, further comprising high-frequency filters, said high-frequency filters being arranged subsequent to said high-frequency switches and being connected to said receivers.

Claim 15 (original): A high-frequency composite unit used in a dual-band cellular phone device according to Claim 14, said high-frequency composite unit including a microwave circuit carrying the two communication systems, wherein said high-frequency composite unit includes a multilayer substrate having a laminated body defined by a plurality of dielectric layers, the multilayer substrate having said diplexer, said high-frequency switches, and said directional coupler.

Claim 16 (original): A high-frequency composite unit according to Claim 15,

Serial No. 09/801,497

August 3, 2004

Reply to the Office Action dated April 5, 2004

Page 6 of 10

wherein said diplexer includes an inductance element and a capacitance element, said high-frequency switch includes a switching element, an inductance element, and a capacitance element, and said directional coupler includes a primary line and a secondary line, the multilayer substrate includes the switching element, the inductance element, the capacitance element, the primary line, and the secondary line, and the multilayer substrate further includes a connector connecting the switching element, the inductance element, the capacitance element, the primary line, and the secondary line.

Claim 17 (original): A dual-band cellular phone device according to Claim 11, wherein said two communication systems include DCS and GSM systems.

Claim 18 (original): A dual-band cellular phone device according to claim 11, wherein a notch filter is provided between said transmitters and said high-frequency switches.

Claim 19 (original): A dual-band cellular phone device according to Claim 11, wherein said directional coupler includes a port.

Claim 20 (original): A dual-band cellular phone device according to Claim 11, wherein said diplexer includes inductance elements and capacitors.